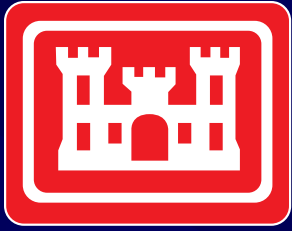


# Safety & Occ. Health Program



**Great Lakes and Ohio River Division**



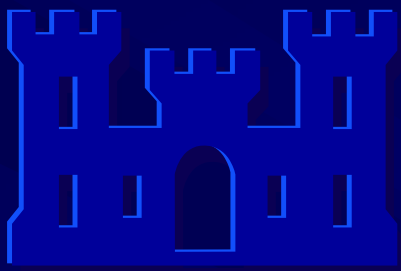
# **FY 03 Contractor Accident Experience**

**Great Lakes & Ohio River Division**

**3 Serious Accidents**

**2 Contractor Fatalities**

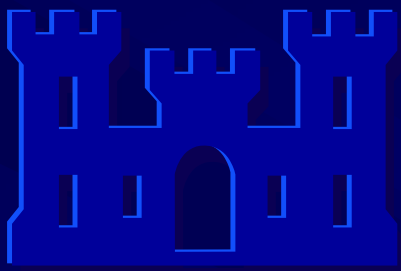
**1 Contractor Crane Accident**



# Scaffold Accident

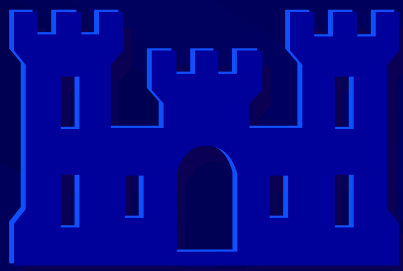






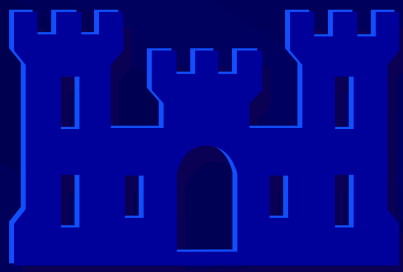
# Scaffold Accident





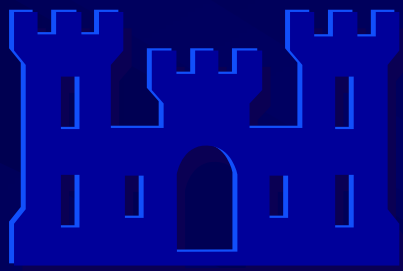
# Causes

- Failure to use fall protective equipment.
- Failure to follow hazard analysis
- Failure to provide training on scaffolding
- Inadequate supply of scaffold materials.
- Work schedule rushed.
- Unseasoned supervision.
- Inspections/reports general and not specific to type/location of scaffold.



# Recommendations

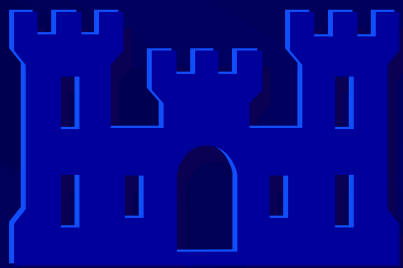
- Ensure use of fall protection.
- Training on fall protection and scaffolding.
- Work performed under the direction of competent person.
- Strict adherence to hazard analysis.
- Prior to each day's use the scaffold should be inspected, assured safe and inspection documented.



# Accident Scene

## Shoring System In-place





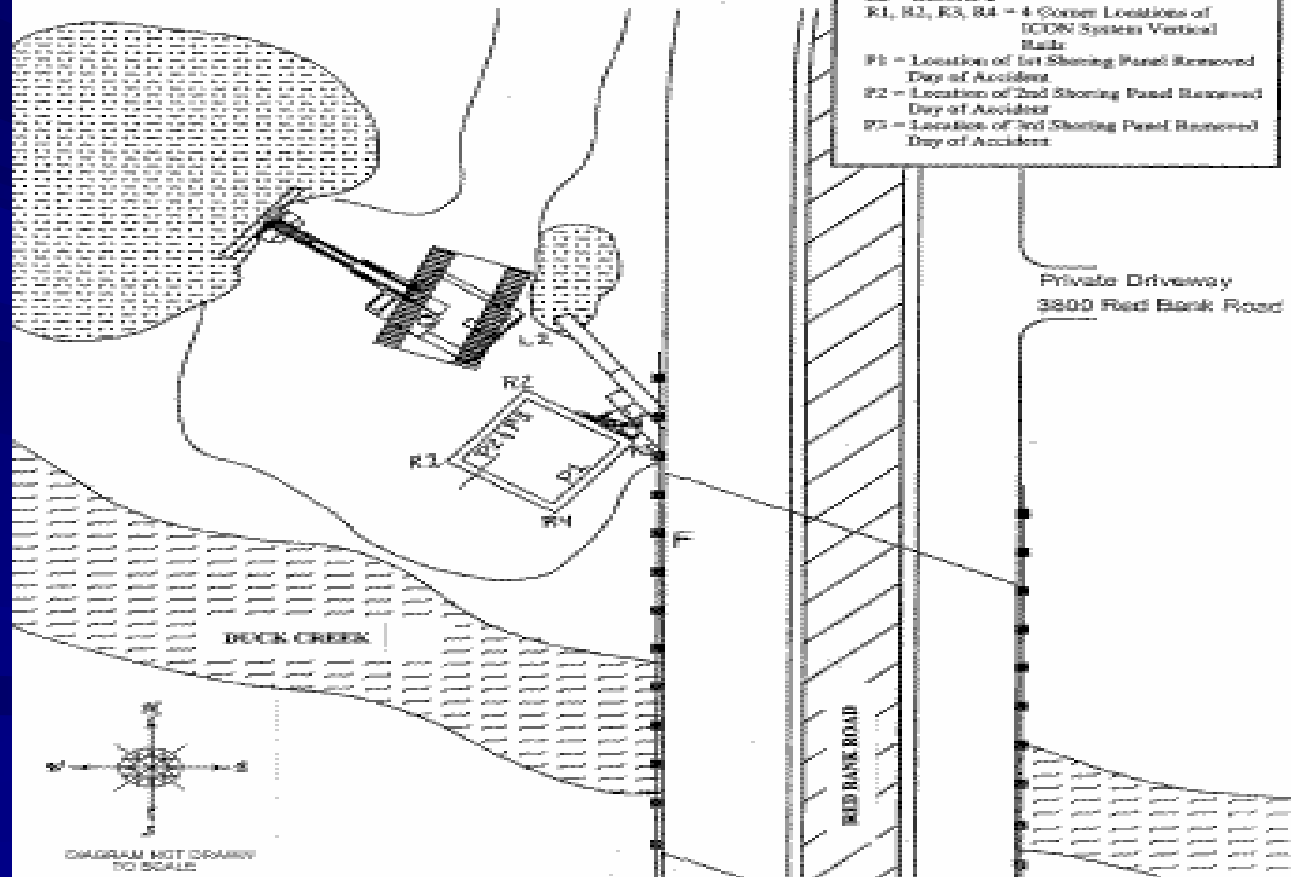
# Site Information

## CONSTRUCTION ACCIDENT RED BANK ROAD & FAIR LANE April 21, 2003

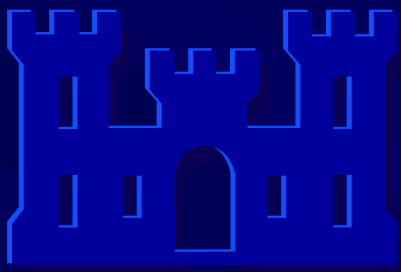
EXHIBIT A

### LEGEND

- F = Foreman
- O = Operator
- L1 = Laborer 1 (Waiting)
- L2 = Laborer 2
- R1, R2, R3, R4 = 4 Corner Locations of ICCM System Vertical Rails
- P1 = Location of 1st Shoring Panel Removed Day of Accident
- P2 = Location of 2nd Shoring Panel Removed Day of Accident
- P3 = Location of 3rd Shoring Panel Removed Day of Accident



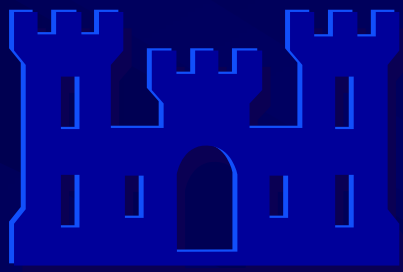




## Causes of Accident

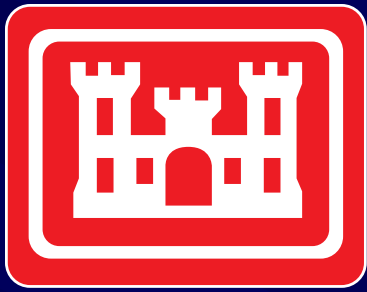
**Direct Cause: Improper Lifting Technique**





# Indirect Causes

- Lack of safe clearance.
- Wet/congested work area.
- Inadequate AHA & insufficient review.
- Difficulties installing and removing shoring system in the type soil is inherent with the shoring system.

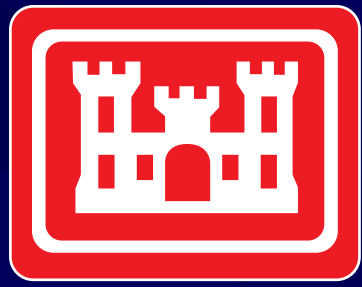


# Crane Accident



- Original procedure was to use 2 cranes to empty the drilling spoil material.
- Due to proximity of river bank, only 1 crane could be used.
- Lift attempted & Crane overturned

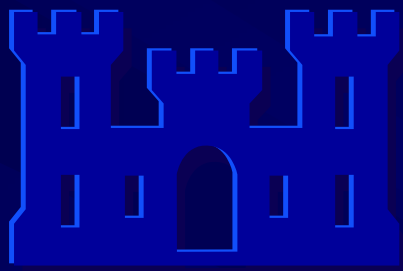




# Outcome

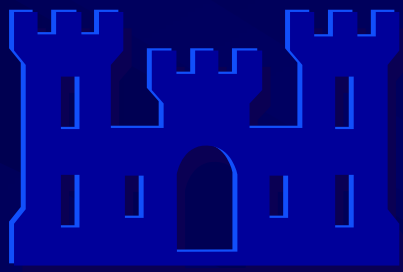






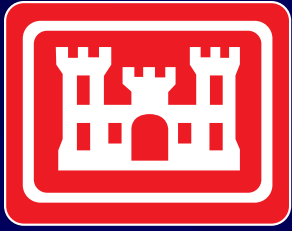
# Causes

- Exceeded load limits of crane.
- Changed lift procedures without approval of resident engineer
- Load charts were misapplied
- Lifting procedures were not adequately addressed in hazard analysis.



# Recommendations

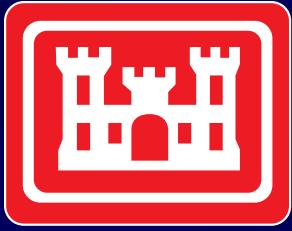
- Modify hazard analysis to adequately address lifting procedures.
- Reinforce significant procedural changes must be approved by Resident Engineer.
- Require refresher training for operators, riggers, & supervisors
- Require magnetic angle indicator for determining list.



# *What's New*

**EM 385-1-1**

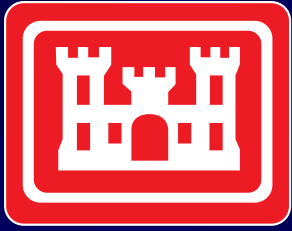
Safety and Health Requirements Manual  
3 November 2003



# *What's New*

~~10 Hour Rule~~  
12 Hour Rule

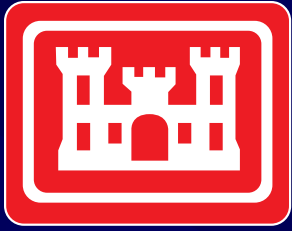




# *What's New*

## 12 Hour Rule

- 12 hours work / 24 hour period
- ✱ 8 hours rest / 24 hour period



# Questions